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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,489	05/13/2002	Marie-Helene Chassagne	0512-1001	6516

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EXAMINER

DONOVAN, MAUREEN C

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/031,489	CHASSAGNE ET AL.	
	Examiner	Art Unit	
	Maureen C Donovan	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/22/02</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group II, claims 18-32 in the reply filed on 14 September 2004 is acknowledged. The traversal is on the ground(s) that Claims 33 and 34, both drawn to cheese are linking claims. While the traversal is not found persuasive due to the fact that a unity of invention restriction is limited to independent claims only, the original reasoning for restriction on further inspection is deemed improper and the restriction requirement is therefore withdrawn.

Information Disclosure Statement

2. The information disclosure statement filed 22 January 2002 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance of the reference EP 0811664 A1, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information. It has been placed in the application file, but the information referred to therein regarding EP 0811664 A1 has not been considered.\

3.

Claim Objections

4. Claim 28 is objected to because of the following informalities: The claim recites a molar ratio of "A/B". Given the information presented in the specification, the examiner assumes that the ratio was intended to be written as "B/A". For examining purposes only the claim will be treated as reading "B/A". Appropriate correction is required.

5. Claims 11 and 27 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Both claims 11 and 27 are dependent upon claims that recite that the fatty acid composition is comprised of at least one fatty acid of group A and on fatty acid of a second group B.

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Claim 11 recites that the limitation that fatty acids A can be present at 100% of the fatty acid composition and that fatty acids B can be present at 0% of the composition, this recitation meaning that it would be possible for only fatty acid group A to be present. The recitation of claim 11, is therefore opposite of the limitations set forth in Claim 6 from which it depends.

Claim 27 recites that fatty acid group B can be present at 100% by weight of the total weight of fatty acids present. This recitation would allow only fatty acid group B to be present, and is therefore opposite of the limitation set forth in Claim 18 from which it depends.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 13,14,16, 27 and 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 13 and 29 recited a $C_3 - C_{16}$ dicarboxylic acid. The disclosure specifies the number of the carbon atom preferably be less than 6 and specified that oxalic acid, which has 2 carbon atoms, is preferred (see specification, page 8). There is no support in the original disclosure for selecting a carbon number of 3 as an endpoint and there is no support for why this endpoint is critically established. The dependent claims are rejected for fully incorporating the deficiencies of the base claim.

Claim 27 recites that fatty acid group A is present from 50-75% by weight and group B is present from 50-100% by weight. The disclosure specifies that the amount of fatty acids of group B is preferably between 0-50% and that group A is preferably present between 50-100% by weight (see specification, page 7, 4th full paragraph). There is no support in the original disclosure for selecting the weight percents as claimed in Claim 27 and there is no support for

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why these percents are critically established. For examining purposes only the weight percent ranges will be treated as they are recited in the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-17,21,23,27,28,29,30,31,32 and 33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 1,4,8,12,13,15,16,17,21,24,28,29,30,31,32 recite a broad recitation, and then continue to recite a narrower statement of the range/limitation, which would be the limitations that follow the words "in particular", "preferably", "especially" and "advantageously". Claims 2-17 and 33 are dependent upon claim 1 and are rejected for fully incorporating the deficiencies of the base claim.

The scope of Claims 15 and 30 is indefinite. Claims 15 and 30 both use parentheses, which renders the claims indefinite as to whether the words inside the parentheses are optional, or required limitations of the claim.

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Claim 26 recites the limitation "the carboxylic acids" in line 2 of the claim. Claims 15 and 30 recite the limitation "polycarboxylic acid". There is insufficient antecedent basis for each of these limitations in the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1,6,7,8,9,11,15,18,23,24,25,27,30,31,32,33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Mikkelsen et al, US patent number 5,516,536.

Mikkelsen discloses a cheese coating composition and a method for coating cheeses, wherein the coating composition is applied onto the cheese (see Column 8, lines 20-68). Mikkelsen discloses that the composition is at least 90 percent an ester of at least one fatty acid and at least one polyol (see Column 4, line 1 and lines 40-55). The polyol of Mikkelsen is a glycerol (see Column 7, lines 41-50). The fatty acids of Mikkelsen include fatty acids with more than 10 carbon atoms such as lignoceric acid, behenic acid and rapeseed oil (see Column 8, lines 2-9) that are at least 80% of the fatty acid total (see Column 3, lines 55-68). The fatty acids of Mikkelsen also include those with only 12 carbon atoms, such as lauric acid, that comprise from 0-18% of the fatty acid total (see Column 4, lines 49-55). It is noted that lauric acid has a melting point of 44°C and that lignoceric acid has a melting point range of 84-86°C, which is 40°C higher than that of lauric acid. Mikkelsen discloses a process for preparing the coating composition through an esterification reaction (see Column 7, lines 41-50) and a cheese coated with the coating composition (see Column 8, lines 65-68 and Column 1, lines 5-15). Mikkelsen discloses an ester within the limitations as instantly claimed, including the proper number of carbon atoms and hydroxyl groups for both the polyol and the fatty acids, therefore it is interpreted that the ester of Mikkelsen inherently discloses the alcohol function to acid function ratio as instantly claimed. Mikkelsen does not disclose using a plasticizer, which meets the limitation of 0% plasticizer present in the composition as recited in claim 31.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 13,14,16, 17 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mikkelsen et al. as applied to claims 1,6,7,8,9,11,15,18,23,24,25,27,30,31,32,33 and 34 above, and further in view of Seaborne et al, US patent number 4,810,534.

Mikkelsen disclosed all the features of the instantly claimed invention except the use of a dicarboxylic acid added to the coating composition and a plasticizer.

Seaborne taught a coating composition used as a moisture barrier for food products such as cheese (see Column 1, lines 15-56) containing acetylated monoglycerides and dicarboxylic acids, such as adipic acid (see Column 7, lines 1-23 and Column 8, lines 18-33). Seaborne taught that the dicarboxylic acid was present from 0-75% of the coating composition (see Column 6, lines 60-68). Seaborne taught that the dicarboxylic acid improves film flexibility (see Column 7, lines 9-10). Seaborne also taught the use of a plasticizer, such as shellac that is compatible with foodstuffs (see Column 6, lines 3-54).

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the dicarboxylic acid of Seaborne to the acetylated monoglyceride of Mikkelsen to provide a food coating composition that was more flexible, in order to avoid cracks and fissures in the film (see Seaborne, Column 7, lines 1-13).

10. Claims 1,2,3,4,5,6,7,9,10,11,12,18,19,20,21,22,23,25,26,27,28 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Volpenhein, US patent number 4,518,772 in view of the combination of The Handbook of Thermoset Plastics and Kester, US patent number 4,960,600.

Volpenhein disclosed a polyol fatty acid polyester composition useable in the food and pharmaceutical industry. The polyol of Volpenhein is any aliphatic compound containing at least 2 free hydroxyl groups, and Volpenhein recites that suitable polyols can be chosen from the class of non-toxic glycols. Volpenhein also discloses the use of sugar alcohols such as sorbitol, which contains 6 carbon atoms and a saturated hydrocarbon-based chain (see Column 3, lines 22-49). Volpenhein disclosed the use of 2 groups of fatty acids, group one comprising fatty acids such as behenic acid and group two comprising such acids as capric acid (which is also known by the name decanoic acid). It is noted that the melting point range of behenic acid is 80-82°C and the melting point range of capric acid is 31-32°C, which meets the claim limitation of a melting point range of at least 40°C. Volpenhein disclosed that group one of the fatty acids are present from 40-80% and group two of the fatty acids are present from 1-30% of the total coating composition. These disclosed weight percents on a total coating composition basis translate into weight percents that meet what is instantly claimed on a total fatty acid basis. In addition the molar ratio of the fatty acids of group two to group one as disclosed by Volpenhein, using the molecular weights of behenic and capric acid, are within the molar ratio range as instantly claimed. Volpenhein also disclosed a process for preparing the coating composition wherein an esterification reaction is carried out between a polyol and the two groups of fatty acids (see Columns 1-6, Steps 1-3).

It is noted that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The composition of Volpenhein would be capable of being used as a cheese coating composition and therefore is interpreted to meet the use limitation of Claim 18.

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Volpenhein does not disclose the percent of the coating composition that is comprised of the polyol fatty acid polyester, a process for coating cheeses, or the use of neopentyl glycol as the polyol.

Kester taught the use of polyol polyesters as moisture barriers for foods and that polyol polyesters would be useable for coating foods wherein it was desirable to reduce moisture loss (see Column 1, lines 5-31). Kester taught that the coating composition should contain from 25-100% polyol fatty acid esters. Kester also taught that the polyol fatty acid polyesters suitable for use could be prepared using the method of Volpenhein (see Column 5, lines 8-19). Kester taught different methods with which the polyol polyesters could be applied to the surface of food (see Column 6, lines 30-38). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the method and percents as taught by Kester for the polyol fatty acid polyester of Volpenhein, since both are directed to polyol fatty acid polyesters for use in the food industry, and since Volpenhein disclosed the use of the polyol fatty acid polyester in food applications, but focused more on the efficient process of making the polyester and did not specify with detail the different applications of the polyester, therefore the ordinarily-skilled artisan would have necessarily referred to teachings of known systems in the art that used polyol fatty acid polyesters, such as that of Kester. Kester specifically states the use of a polyol fatty acid polyester and that the polyester could be made using the process of Volpenhein, and thus it would not have involved an inventive step for one of ordinary skill in the art to have utilized the method and percents of Kester with the composition of Volpenhein, as instantly claimed.

The Handbook of Thermoset Plastics taught that significant improvement in hydrolytic stability, chemical resistance and resistance to yellowing could be achieved through the use of neopentyl glycol in polyester compositions (see paragraphs 2 and 3 on page 119).

Thus, it would have been obvious to one of ordinary skill in the art to have utilized neopentyl glycol as provided by The Handbook of Thermoset Plastics in the polyester as disclosed by Volpenhein. Volpenhein provides for the use of a non-toxic glycol in producing the polyester, and provides the general protocol and parameters for choosing a polyol in that it contains at least two free hydroxyl groups. As the teachings of Volpenhein do not specifically provide non-toxic glycols to choose from, the ordinarily skilled artisan would have necessarily referred to teachings of known chemicals in the art in order to create the polyester, such as that

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of The Handbook of Thermoset Plastics. The Handbook of Thermoset Plastics presents neopentyl glycol that is useable in polyester formation and provides the benefits of hydrolytic stability among others, and thus it would not have involved an inventive step for one of ordinary skill in the art to have utilized neopentyl glycol for the production of a polyol fatty acid polyester, as instantly claimed

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Poppe et al., US patent number 4,585,658.

Cebula et al., US patent number 5,147,670.

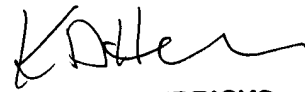
Van Der Plank, US patent number 4,968,791.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maureen C Donovan whose telephone number is (571) 272-2739. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MCD


KEITH HENDRICKS
PRIMARY EXAMINER